



## Proposed WaterSentinel Initiative

As part of the President's proposed Fiscal Year 2006 budget, EPA is planning the WaterSentinel Initiative, a demonstration project that would design, deploy and evaluate a model contamination warning system for drinking water security. The proposed project, which would be developed in partnership with select cities and laboratories, responds to a Homeland Security Presidential Directive that charges EPA to develop surveillance and monitoring systems to provide early detection of water contamination.

A contamination warning system involves the active deployment and use of monitoring technologies/strategies and enhanced surveillance activities to collect, integrate, analyze, and communicate information. Timely warning of potential water contamination incidents allows for immediate response actions that can minimize the public health and economic impacts of contamination.

### **What is Homeland Security Presidential Directive 9 (HSPD-9)?**

HSPD-9 is the directive that charges EPA to develop robust, comprehensive and fully coordinated surveillance and monitoring systems to provide early detection and awareness of water contamination. In order to support the monitoring and response to an incident, HSPD-9 also directs EPA to develop nationwide laboratory networks that integrate existing federal and state laboratory resources.

### **What is the overall goal of WaterSentinel?**

The overall goal of WaterSentinel is to design and demonstrate an effective system for timely detection and appropriate response to drinking water contamination threats and incidents through a series of pilot programs that would have broad application to the nation's drinking water utilities. WaterSentinel would prove the concept so that drinking water utilities of all sizes and characteristics can adopt and implement an effective contamination warning system.

### **How would WaterSentinel detect a contamination incident?**

Although we are continually refining our conceptual design for the program, WaterSentinel would adopt a four-fold approach to detecting contamination involving:

- monitoring of water quality parameters;
- direct monitoring and laboratory analysis of high priority chemical, biological, and radiological contaminants;
- integration of water system data with existing public health surveillance systems; and
- active surveillance of customer complaints.

In addition to other critical sources of information, such as intelligence threat analysis and reports from local law enforcement, WaterSentinel would harness and leverage an array of data streams in support of robust contamination warning system.

### **How could I participate in WaterSentinel?**

EPA will identify a select number of utilities, laboratories and communities to pilot WaterSentinel. In addition to these pilot locations, EPA envisions collaborating with its partners in the water sector (water utilities, laboratories, states, emergency responders, public health officials, law enforcement, Federal agencies, technical experts, among others) to solicit input for WaterSentinel throughout the design and implementation of the project. For example, water sector partners could provide guidance on the design of the model contamination warning system, identify the dual use benefits at the various stages

throughout the pilot study, participate in the development of performance measures, participate in the technical review and evaluation of guidance documents and materials, and in some cases, participate in training and table-top exercises. Broad involvement in WaterSentinel will enable non-pilot utilities, laboratories and others to take home what is learned in WaterSentinel to implement a contamination warning system in their own communities.

**How do I get involved if I'm a technology manufacturer?**

WaterSentinel would rely on the Technology Testing and Evaluation Panel (TTEP) program in our Office of Research and Development for analysis of technologies that could be candidates for deployment in a contamination warning system. Through TTEP, EPA will continue to evaluate existing detection and sensor equipment, as well as data management integration software, among others, to determine which technologies would have application for WaterSentinel.

**What is EPA's timeframe for completing these activities?**

WaterSentinel has been proposed as a pilot initiative to commence in Fiscal Year 2006. EPA will launch this project by building on existing efforts. Throughout Fiscal Year 2005, EPA will continue to work with the water sector on activities that could lay the groundwork for WaterSentinel. Such activities could include the design of a model contamination warning system, analysis of contaminants that could be effectively monitored for a timely response, the development of consequence management protocols for response to a potential incident, and research into technologies that could be candidates for deployment.

**Where do I get more information?**

We recommend that utilities frequently visit EPA's Water Security Web site, which is continually updated to reflect new information on training, tools, and the latest scientific advances to protect drinking water and wastewater utilities. The website is: [www.epa.gov/watersecurity](http://www.epa.gov/watersecurity)